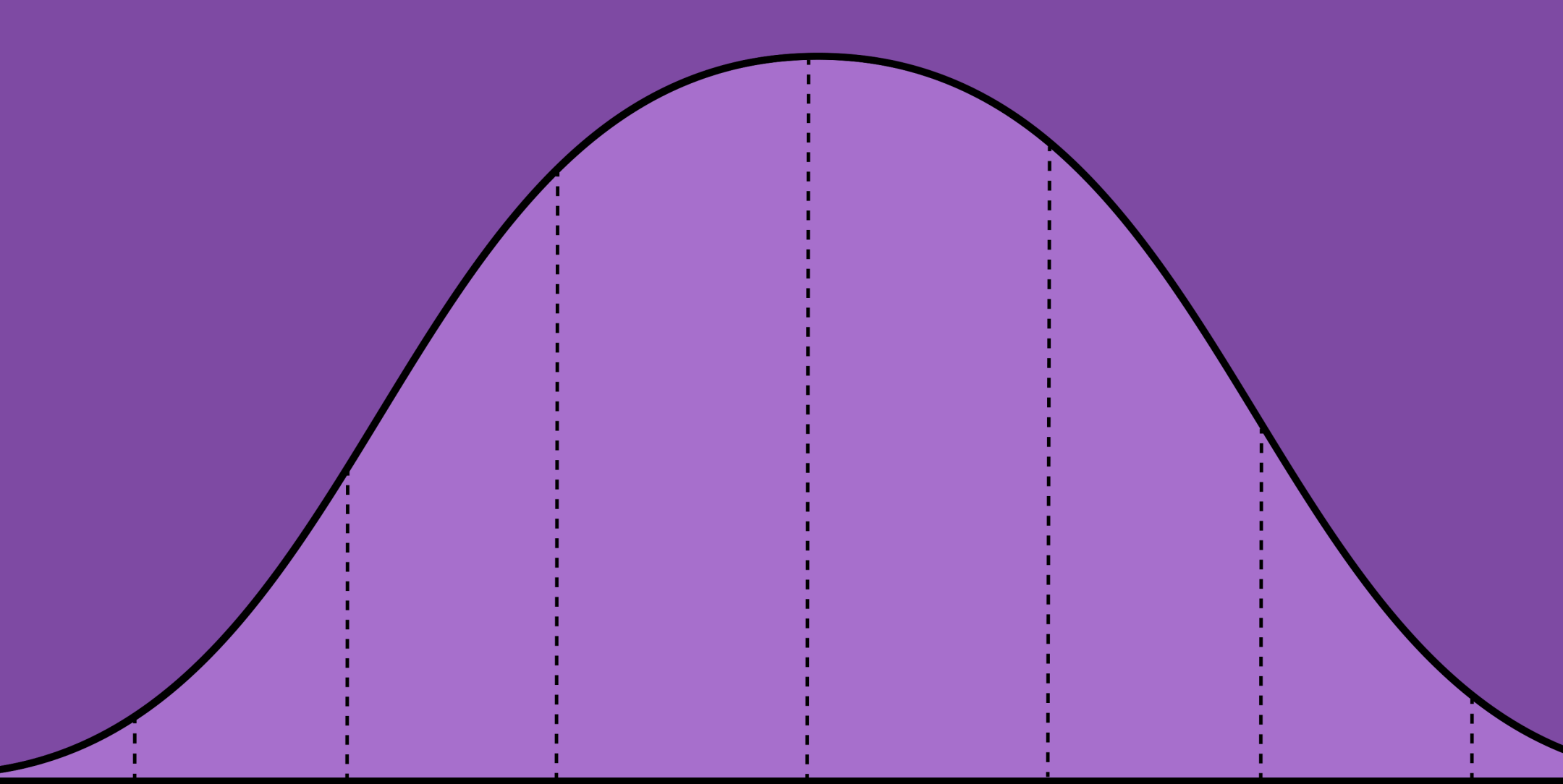
Understanding z Scores

By Arjun Gupta



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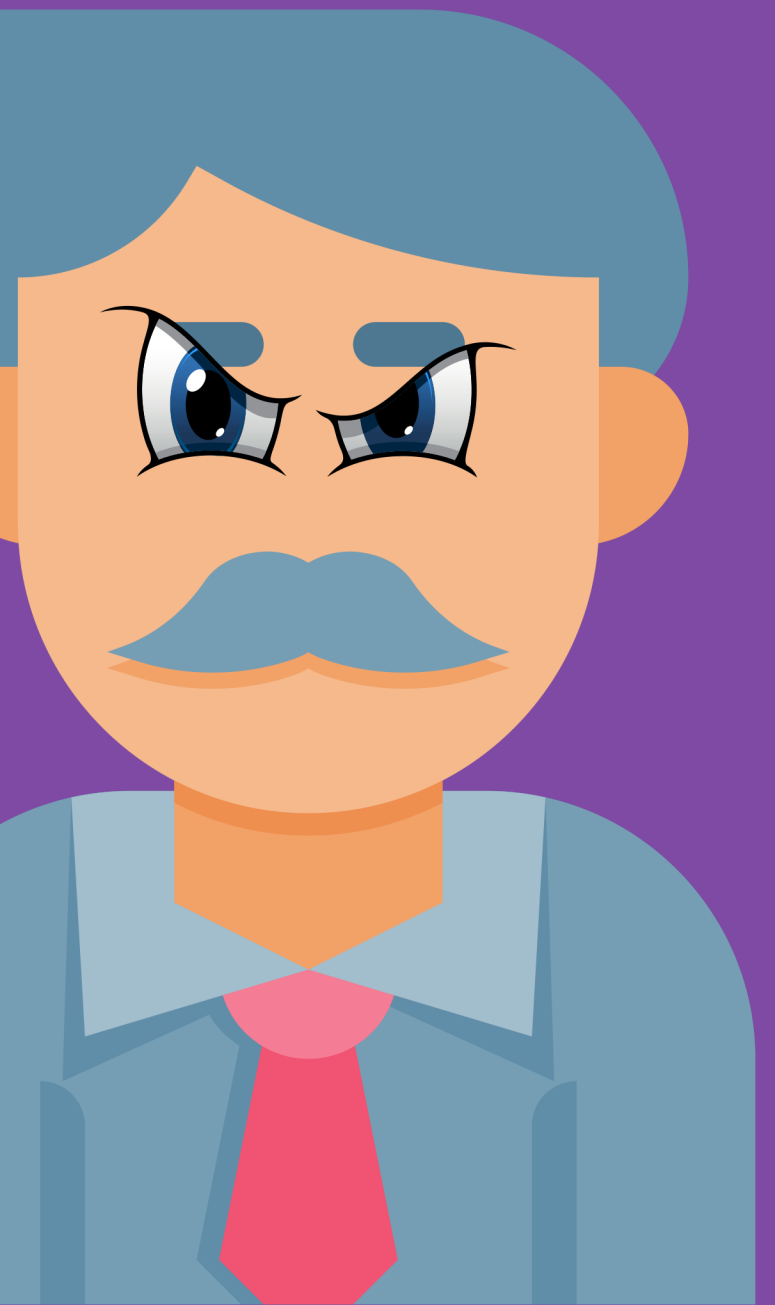
IT

How did your exam go son?

I got 79%, Dad!

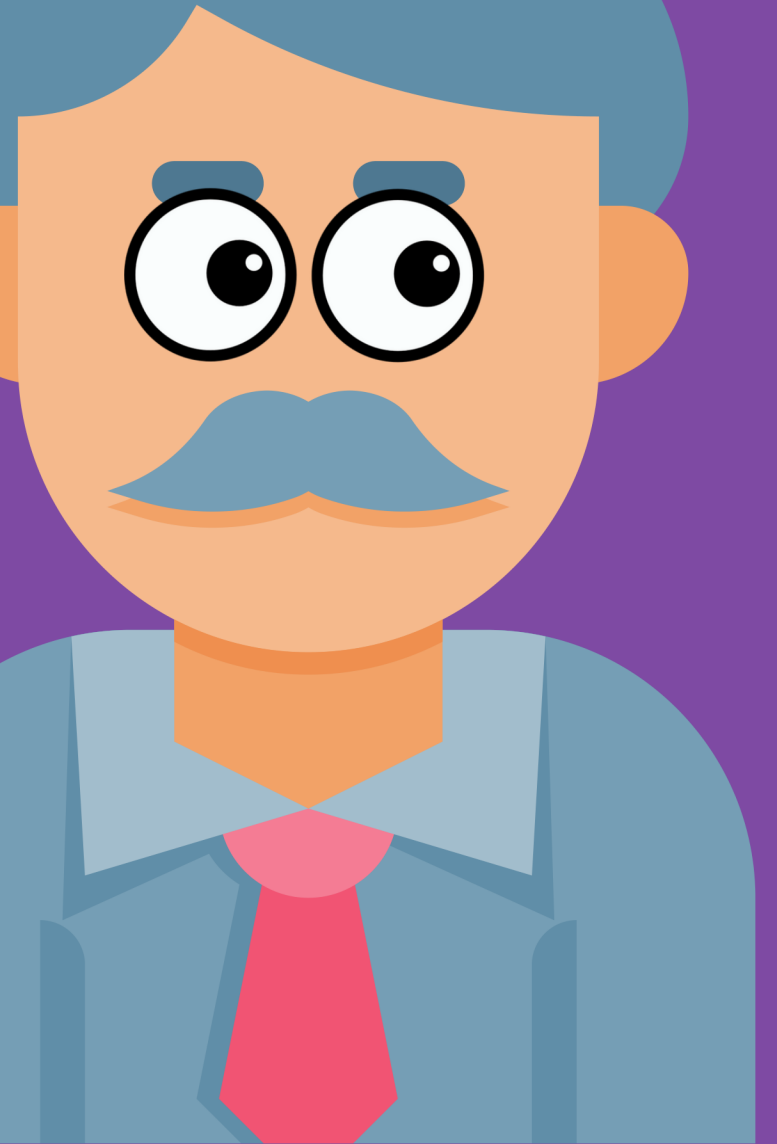
That's horrible. Did you not study?

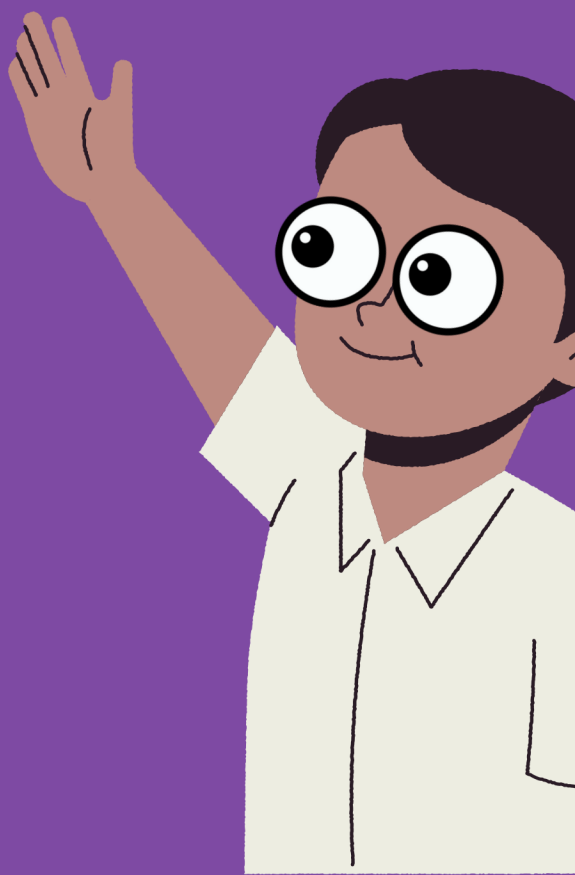


But the class average was 65%

That means nothing. Being above average is not good.

But our standard deviation was just 7.





Then why didn't you say this earlier, my son?

I should have just told you my z score.

Sometimes, raw scores and averages don't tell the whole story.

And not every kid will get to the deviation before being manhandled.

That's why its better to use standardized scores like the z score

The z score gives you all the information you need in one number. It contextualizes your performance in respect to others

Individual score

Sample mean

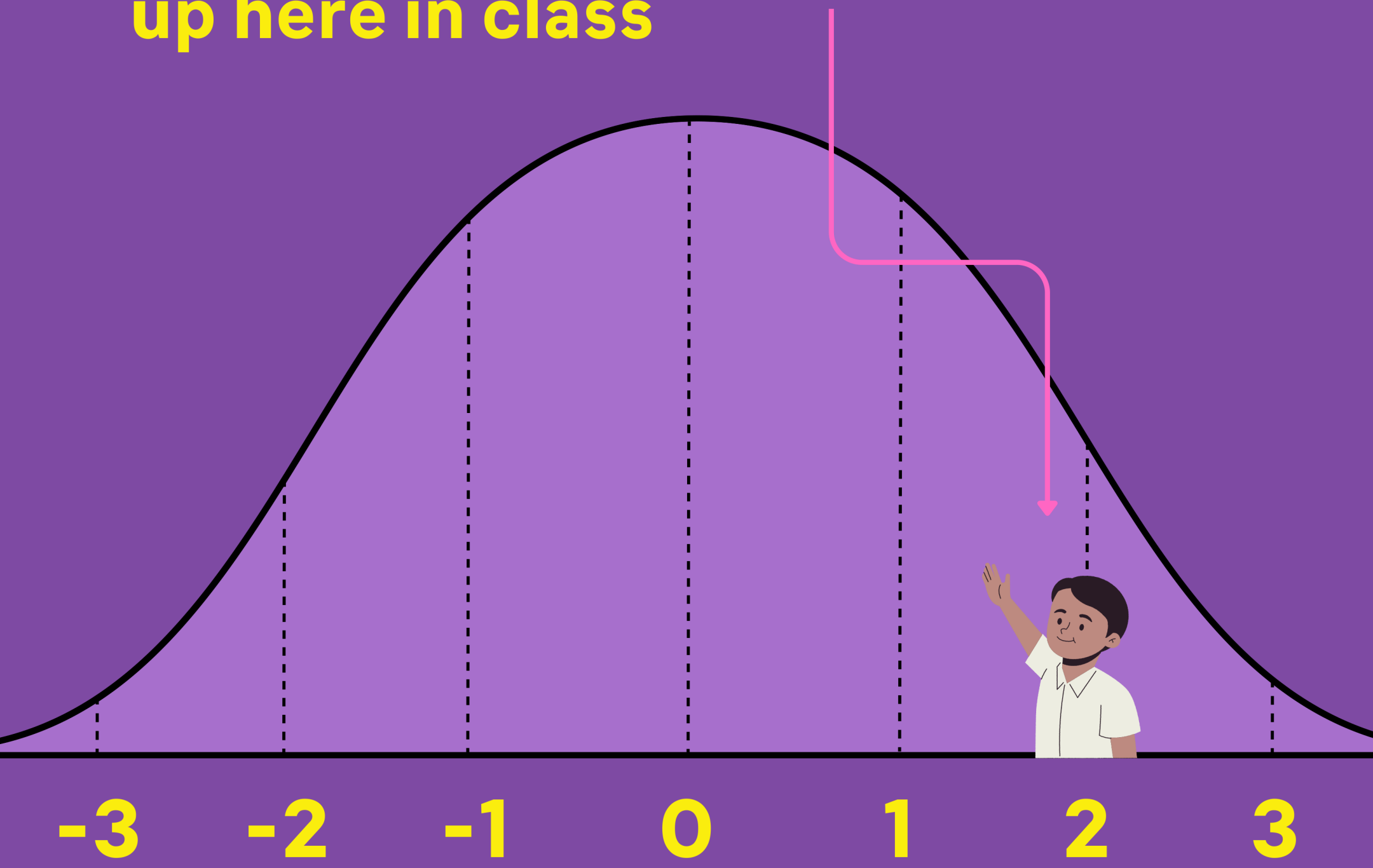
$$z = \frac{X - \bar{X}}{\text{Std. Dev.}}$$

So this kid got a z score of

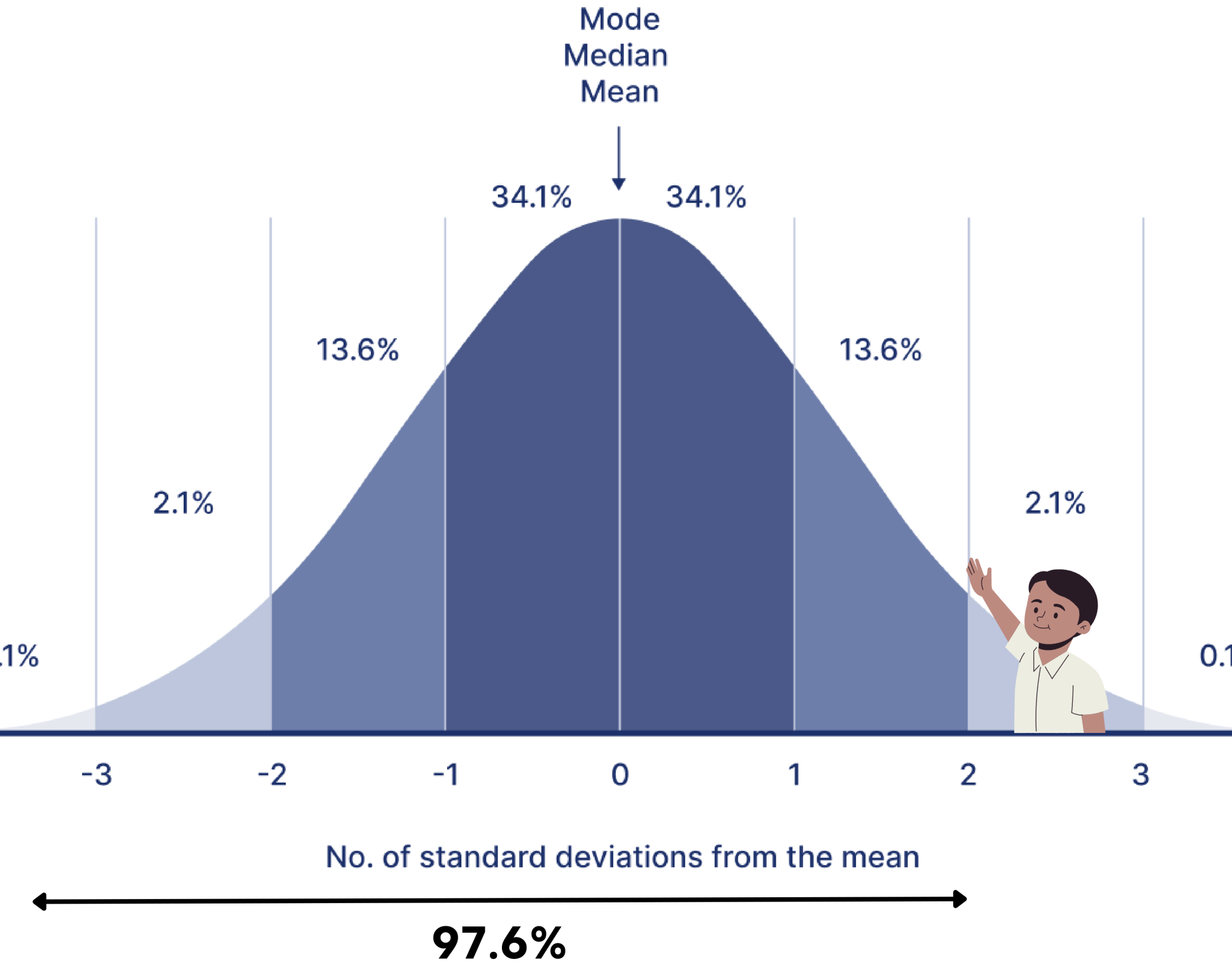
$$\frac{79 - 65}{7} = +2$$

Which is pretty damn good.

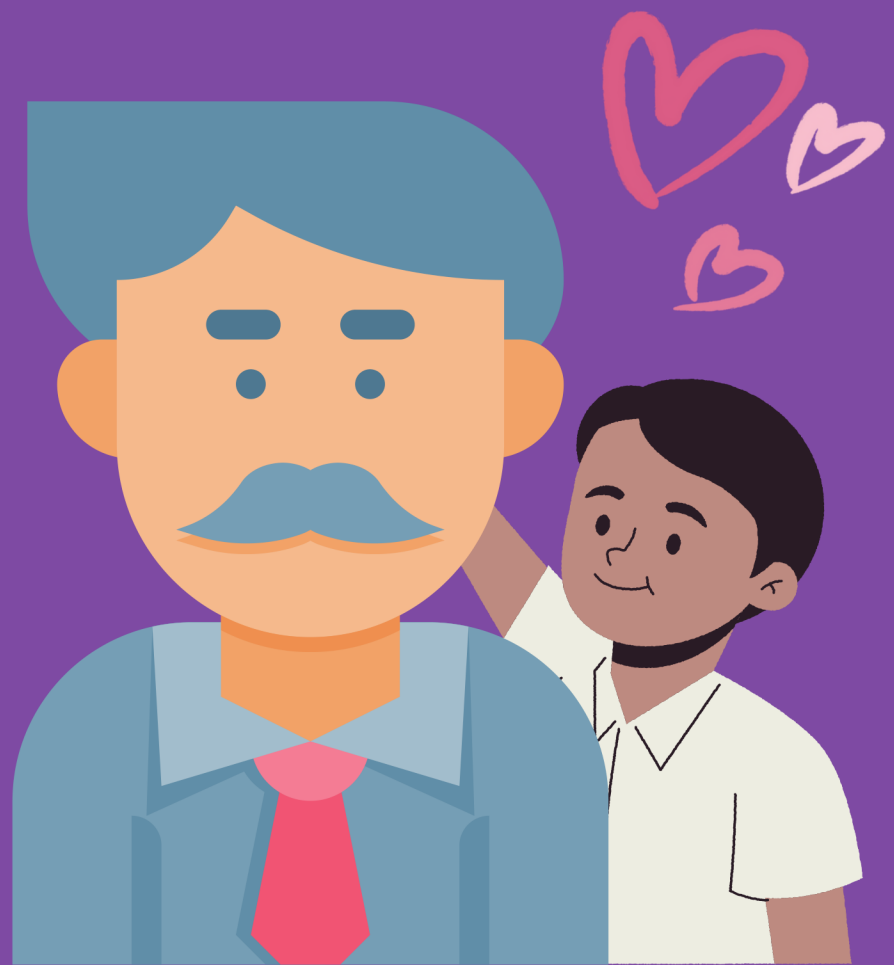
Assuming normal distribution, the kid ended up here in class



Better than 97.6% of his classmates



Remember to use standardized scores when necessary.
It could literally save your life.



Here are some other standardized scores you could use to save yourself

T Score	= 10*z + 50
STen score	= 2*z + 5.5

Follow for more potentially life-saving tips.

And research knowledge along with it.